

## General

### Guideline Title

Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update.

### Bibliographic Source(s)

Wong SL, Faries MB, Kennedy EB, Agarwala SS, Akhurst TJ, Ariyan C, Balch CM, Berman BS, Cochran A, Delman KA, Gorman M, Kirkwood JM, Moncrieff MD, Zager JS, Lyman GH. Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update. J Clin Oncol. 2018 Feb;36(4):399-413. [44 references] [PubMed](#)

### Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Wong SL, Balch CM, Hurley P, Agarwala SS, Akhurst TJ, Cochran A, Cormier JN, Gorman M, Kim TY, McMasters KM, Noyes RD, Schuchter LM, Valsecchi ME, Weaver DL, Lyman GH. Sentinel lymph node biopsy for melanoma: American Society of Clinical Oncology and Society of Surgical Oncology joint clinical practice guideline. J Clin Oncol. 2012 Aug 10;30(23):2912-8. [98 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

### NEATS Assessment

National Guideline Clearinghouse (NGC) has assessed this guideline's adherence to standards of trustworthiness, derived from the Institute of Medicine's report [Clinical Practice Guidelines We Can Trust](#).

■■■■= Poor ■■■= Fair ■■■= Good ■■■= Very Good ■■■= Excellent

Assessment	Standard of Trustworthiness
YES	Disclosure of Guideline Funding Source

■■■■■	Disclosure and Management of Financial Conflict of Interests
	Guideline Development Group Composition
YES	Multidisciplinary Group
YES	Methodologist Involvement
■■■■■	Patient and Public Perspectives
	Use of a Systematic Review of Evidence
■■■■■	Search Strategy
■■■■■	Study Selection
■■■■■	Synthesis of Evidence
	Evidence Foundations for and Rating Strength of Recommendations
■■■■■	Grading the Quality or Strength of Evidence
■■■■■	Benefits and Harms of Recommendations
■■■■■	Evidence Summary Supporting Recommendations
■■■■■	Rating the Strength of Recommendations
■■■■■	Specific and Unambiguous Articulation of Recommendations
■■■■■	External Review
■■■■■	Updating

## Recommendations

### Major Recommendations

Definitions for the rating of evidence (High, Intermediate, Low, Insufficient); types of recommendations (Evidence based, Formal consensus, Informal consensus, No recommendation); and strength of recommendations (Strong, Moderate, Weak) are provided at the end of the "Major Recommendations" field.

#### Clinical Question 1

What Are the Indications for Sentinel Lymph Node (SLN) Biopsy?

*Recommendation 1.1:* Thin melanomas: Routine SLN biopsy is not recommended for patients with melanomas that are T1a (nonulcerated lesions <0.8 mm in Breslow thickness). SLN biopsy may be considered for T1b patients (0.8 to 1.0 mm Breslow thickness or <0.8 mm Breslow thickness with ulceration) after a thorough discussion with the patient of the potential benefits and risk of harms

associated with the procedure (Type of recommendation: evidence based; potential benefits outweigh risk of harms; Quality of evidence: low to intermediate; Strength of recommendation: moderate).

*Recommendation 1.2:* Intermediate-thickness melanomas: SLN biopsy is recommended for patients with melanomas that are T2 or T3 (Breslow thickness of >1.0 to 4.0 mm; Type of recommendation: evidence based; potential benefits outweigh risks of harm; Quality of evidence: intermediate; Strength of recommendation: moderate).

*Recommendation 1.3:* Thick melanomas: SLN biopsy may be recommended for patients with melanomas that are T4 (>4.0 mm in Breslow thickness), after a thorough discussion with the patient of the potential benefits and risks of harm associated with the procedure (Type of recommendation: Evidence based; potential benefits outweigh risks of harm; Quality of evidence: low to intermediate; Strength of recommendation: moderate).

## Clinical Question 2

What Is the Role of Completion Lymph Node Dissection (CLND)?

*Recommendation 2.1:* CLND or careful observation are options for patients with low-risk micrometastatic disease, with due consideration of clinicopathological factors. For higher risk patients, careful observation may be considered only after a thorough discussion with patients about the potential risks and benefits of forgoing CLND (Type of recommendation: evidence based; potential benefits outweigh risks of harm; Quality of evidence: intermediate to high; Strength of recommendation: strong).

## Definitions

Guide for Rating Quality of Evidence

Rating for Strength of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (i.e., balance of benefits versus harms) and that further research is very unlikely to change either the magnitude or direction of this net effect.
Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction of this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

Guide for Types of Recommendations

Type of Recommendation	Definition
Evidence-Based	There was sufficient evidence from published studies to inform a recommendation to guide clinical practice.
Formal Consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the data supplement (see the "Availability of Companion Documents" field).
Informal Consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. The recommendation is considered the best current

Type of Recommendation	Definition
No Recommendation	guidance for practice, based on informal consensus of the Expert Panel. The Panel agreed that a formal consensus process was not necessary for reasons described in the literature review and discussion. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

#### Guide for Strength of Recommendations

Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on: (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of Expert Panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.
Moderate	There is moderate confidence that the recommendation reflects best practice. This is based on: (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of Expert Panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on: (1) limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of Expert Panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.

## Clinical Algorithm(s)

None provided

## Scope

## Disease/Condition(s)

Newly diagnosed melanoma

## Guideline Category

Assessment of Therapeutic Effectiveness

Evaluation

Management

Treatment

## Clinical Specialty

Dermatology

Internal Medicine

Nuclear Medicine

Oncology

Pathology

Surgery

## Intended Users

Physicians

## Guideline Objective(s)

To update the American Society of Clinical Oncology (ASCO)-Society of Surgical Oncology (SSO) guideline for sentinel lymph node (SLN) biopsy in melanoma

## Target Population

Patients with newly diagnosed melanoma without clinical evidence of lymph node involvement

## Interventions and Practices Considered

1. Sentinel lymph node (SNL) biopsy
2. Completion lymph node dissection (CLND)

## Major Outcomes Considered

- Melanoma-specific survival
- Disease-free survival
- Recurrence
- Variation in rate of sentinel lymph node (SLN) positivity according to established risk factors (e.g., ulceration, mitotic rate)
- Morbidity
- Regional disease control
- Operative morbidity

## Methodology

### Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

### Description of Methods Used to Collect/Select the Evidence

#### Methods

Articles were selected for inclusion in the systematic review based on the following criteria:

Clinical Question 1

Patients with primary cutaneous melanoma without clinical evidence of lymph node involvement  
Subgroups of interest: Patients with melanoma of varying Breslow thickness, including thin ( $\leq 1.0$  mm), intermediate ( $>1.0$  to  $4.0$  mm), and thick ( $>4.0$  mm)  
Intervention: Wide excision and sentinel lymph node (SLN) biopsy  
Comparison: Wide excision and nodal observation  
Outcomes: Melanoma-specific survival, disease-free survival, recurrence, variation in rate of SLN positivity according to established risk factors (e.g., ulceration, mitotic rate), morbidity  
Eligible study designs: Systematic reviews, randomized and nonrandomized studies

Clinical Question 2

Patients with newly diagnosed primary cutaneous melanoma  
Intervention: Completion lymph node dissection (CLND) after a positive SLN biopsy  
Comparison: Observation (no CLND) after a positive SLN biopsy  
Outcomes: Survival (melanoma-specific, disease-free), regional disease control, operative morbidity  
Eligible study designs: For the previous version of this guideline, the Expert Panel stated that the results of phase III randomized controlled trials (RCTs) were awaited and would inform the recommendation related to CLND after positive SLN biopsy; therefore, the standard for clinical question 2 was limited to phase III RCTs.

PubMed was searched from September 2011 to June 16, 2017. Articles were excluded from the systematic review if they were (1) meeting abstracts not subsequently published in peer-reviewed journals; (2) editorials, commentaries, letters, news articles, case reports, narrative reviews; (3) published in a non-English language. In addition, because sentinel node status has already been established as a prognostic indicator and has been incorporated into the American Joint Committee on Cancer (AJCC) staging system, studies reporting outcomes related to the prognostic significance of a positive sentinel node were excluded. Test performance characteristics of SLN biopsy, e.g., false negative rates, were considered to have already been established; therefore, studies reporting only these outcomes were also excluded from this guideline update. To avoid duplication, data were not extracted from studies that were included in eligible systematic reviews or meta-analyses.

Number of Source Documents

Fourteen full text studies were included.

See Data Supplement 2 (see the "Availability of Companion Documents" field) for a Quality of Reporting of Meta-analyses (QUOROM) Diagram showing the study selection process.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

[Guide for Rating Quality of Evidence](#)

Rating for Strength of Evidence	Definition
High	High confidence that the available evidence reflects the true magnitude and direction of the net effect (i.e., balance of benefits versus harms) and that further research is very unlikely to change either the magnitude or direction of this net effect.

Rating for Strength of Evidence	Definition
Intermediate	Moderate confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research is unlikely to alter the direction of the net effect; however, it might alter the magnitude of the net effect.
Low	Low confidence that the available evidence reflects the true magnitude and direction of the net effect. Further research may change either the magnitude and/or direction of this net effect.
Insufficient	Evidence is insufficient to discern the true magnitude and direction of the net effect. Further research may better inform the topic. The use of the consensus opinion of experts is reasonable to inform outcomes related to the topic.

#### Guide for Rating of Potential for Bias

Rating of Potential for Bias	Definitions for Rating Potential for Risk of Bias in Randomized Controlled Trials
Low risk	No major features in the study that risk biased results, and none of the limitations are thought to decrease the validity of the conclusions. The study avoids problems such as failure to apply true randomization, selection of a population unrepresentative of the target patients, high dropout rates, and no intention-to-treat analysis; and key study features are described clearly (including the population, setting, interventions, comparison groups, measurement of outcomes, and reasons for dropouts).
Intermediate	The study is susceptible to some bias, but flaws are not sufficient to invalidate the results. Enough of the items introduce some uncertainty about the validity of the conclusions. The study does not meet all the criteria required for a rating of good quality, but no flaw is likely to cause major bias. The study may be missing information, making it difficult to assess limitations and potential problems.
High risk	There are significant flaws that imply biases of various types that may invalidate the results. Several of the items introduce serious uncertainty about the validity of the conclusions. The study has serious errors in design, analysis, or reporting; large amounts of missing information; or discrepancies in reporting.

## Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

## Description of the Methods Used to Analyze the Evidence

### Data Extraction

Literature search results were reviewed and deemed appropriate for full text review by two American Society of Clinical Oncology (ASCO) staff reviewers in consultation with the Expert Panel Co-Chairs. Data were extracted by two staff reviewers and subsequently checked for accuracy through an audit of the data by another ASCO staff member. Disagreements were resolved through discussion and consultation with the Co-Chairs if necessary. Evidence tables are provided in the manuscript.

### Study Quality Assessment

Study quality was formally assessed for the studies identified. Design aspects related to the individual study quality were assessed by one reviewer and included factors such as blinding, allocation concealment, placebo control, intention to treat, funding sources, etc. The risk of bias is assessed as "low," "intermediate," or "high" for most of the identified evidence.

## Methods Used to Formulate the Recommendations

Expert Consensus

# Description of Methods Used to Formulate the Recommendations

## Guideline Update Process

The Expert Panel met via teleconference and/or webinar and corresponded through e-mail. Based upon the consideration of the evidence from a systematic review of the literature conducted by a trained methodologist, the authors were asked to contribute to the development of the guideline, provide critical review, and finalize the guideline recommendations. The recommendations were developed by an Expert Panel with multidisciplinary representation, including expertise in medical oncology, surgical oncology, nuclear medicine, pathology, and plastic and reconstructive surgery.

The guideline recommendations are crafted, in part, using the Guidelines Into Decision Support (GLIDES) methodology and accompanying BRIDGE-Wiz software. In addition, a guideline implementability review is conducted. Ratings for the type and strength of recommendation, evidence, and potential bias are provided with each recommendation.

Detailed information about the methods used to develop this update is available in the Methodology Supplement (see the "Availability of Companion Documents" field), including an overview (e.g., panel composition, development process and revision dates; the recommendation development process [GLIDES and BRIDGE-Wiz]; and quality assessment).

## Rating Scheme for the Strength of the Recommendations

### Guide for Types of Recommendations

Type of Recommendation	Definition
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Formal Consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. Therefore, the Expert Panel used a formal consensus process to reach this recommendation, which is considered the best current guidance for practice. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak"). The results of the formal consensus process are summarized in the guideline and reported in the data supplement (see the "Availability of Companion Documents" field).
Informal Consensus	The available evidence was deemed insufficient to inform a recommendation to guide clinical practice. The recommendation is considered the best current guidance for practice, based on informal consensus of the Expert Panel. The Panel agreed that a formal consensus process was not necessary for reasons described in the literature review and discussion. The Panel may choose to provide a rating for the strength of the recommendation (i.e., "strong," "moderate," or "weak").
No Recommendation	There is insufficient evidence, confidence, or agreement to provide a recommendation to guide clinical practice at this time. The Panel deemed the available evidence as insufficient and concluded it was unlikely that a formal consensus process would achieve the level of agreement needed for a recommendation.

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Rating for Strength of Recommendation	Definition
Strong	There is high confidence that the recommendation reflects best practice. This is based on: (1) strong evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with no or minor exceptions; (3) minor or no concerns about study quality; and/or (4) the extent of Expert Panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a strong recommendation.



Rating for Strength of Recommendation	Definition
	There is moderate confidence that the recommendation reflects best practice. This is based on: (1) good evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, with minor and/or few exceptions; (3) minor and/or few concerns about study quality; and/or (4) the extent of Expert Panelists' agreement. Other compelling considerations (discussed in the guideline's literature review and analyses) may also warrant a moderate recommendation.
Weak	There is some confidence that the recommendation offers the best current guidance for practice. This is based on: (1) limited evidence for a true net effect (e.g., benefits exceed harms); (2) consistent results, but with important exceptions; (3) concerns about study quality; and/or (4) the extent of Expert Panelists' agreement. Other considerations (discussed in the guideline's literature review and analyses) may also warrant a weak recommendation.

## Cost Analysis

The Expert Panel for this guideline is not aware of any existing cost effectiveness analyses related to the clinical questions on this topic.

## Method of Guideline Validation

External Peer Review

Internal Peer Review

## Description of Method of Guideline Validation

Members of the Expert Panel were responsible for reviewing and approving the penultimate version of guideline. This guideline was also reviewed and approved by the American Society of Clinical Oncology (ASCO) Clinical Practice Guideline Committee and by the Society of Surgical Oncology (SSO) Executive Council prior to publication.

ASCO Clinical Practice Guidelines Committee approved: July 20, 2017.

## Evidence Supporting the Recommendations

### Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

## Benefits/Harms of Implementing the Guideline Recommendations

### Potential Benefits

- Knowledge of regional lymph node status helps to determine prognosis, facilitates strategies for regional disease control, and aids in the selection of patients who may benefit from adjuvant therapy. Sentinel lymph node (SLN) biopsy is a minimally invasive procedure that accurately detects nodal metastases in patients with clinically occult disease.
- SLN biopsy has been found to be useful for intermediate-thickness melanoma, based on results from a meta-analysis that showed low false-negative rates and high rates of sentinel node detection.

## Potential Harms

- In Multicenter Selective Lymphadenectomy I (MSLT-I), the most common complications after sentinel lymph node (SLN) biopsy resolved over time and included seroma (5.5%), infection (4.6%) and wound separation (1.2%). A more recent meta-analysis reported an overall complication rate of 4.6%.
- Data from MSLT-I demonstrated a higher risk of lymphedema with completion lymph node dissection (CLND) when disease is detected clinically during follow-up; however, patients were not closely followed with nodal ultrasound in that study.
- Adverse events such as lymphedema were more common in the CLND group than in the observation group in MSLT-II (24.1% v 6.3%).
- In the German Dermatologic Oncology Cooperative Group (DeCOG-SLT) trial, adverse events occurred in 24% of 240 patients, including  $\geq$  grade 3 adverse events in 14% of patients. Grade 3 and 4 events included lymphedema (n = 20), lymph fistula (n = 3), seroma (n = 3), infection (n = 3), and delayed wound healing (n = 5).

## Qualifying Statements

### Qualifying Statements

#### Guideline Disclaimer

The Clinical Practice Guidelines and other guidance published herein are provided by the American Society of Clinical Oncology (ASCO) and the Society of Surgical Oncology (SSO) to assist providers in clinical decision-making. The information herein should not be relied upon as being complete or accurate, nor should it be considered as inclusive of all proper treatments or methods of care or as a statement of the standard of care. With the rapid development of scientific knowledge, new evidence may emerge between the time information is developed and when it is published or read. The information is not continually updated and may not reflect the most recent evidence. The information addresses only the topics specifically identified therein and is not applicable to other interventions, diseases, or stages of diseases. This information does not mandate any particular course of medical care. Further, the information is not intended to substitute for the independent professional judgment of the treating provider, as the information does not account for individual variation among patients. Recommendations reflect high, moderate, or low confidence that the recommendation reflects the net effect of a given course of action. The use of words like "must," "must not," "should," and "should not" indicates that a course of action is recommended or not recommended for either most or many patients, but there is latitude for the treating physician to select other courses of action in individual cases. In all cases, the selected course of action should be considered by the treating provider in the context of treating the individual patient. Use of the information is voluntary. ASCO and the SSO provide this information on an "as is" basis and makes no warranty, express or implied, regarding the information. ASCO and the SSO specifically disclaim any warranties of merchantability or fitness for a particular use or purpose. ASCO and the SSO assume no responsibility for any injury or damage to persons or property arising out of or related to any use of this information, or for any errors or omissions.

See also the "Important Qualifying Statements" sections in the original guideline document.

## Implementation of the Guideline

### Description of Implementation Strategy

#### Guideline Implementation

American Society of Clinical Oncology (ASCO) guidelines are developed for implementation across health settings. Barriers to implementation include the need to increase awareness of the guideline recommendations among front-line practitioners and survivors of cancer and caregivers, and also to provide adequate services in the face of limited resources. The guideline Bottom Line Box was designed to facilitate implementation of recommendations. This guideline will be distributed widely through the ASCO Practice Guideline Implementation Network. ASCO guidelines are posted on the ASCO Web site and most often published in *Journal of Clinical Oncology* and *Journal of Oncology Practice*.

For additional information on the ASCO implementation strategy, please see the [ASCO Web site](#)

## Implementation Tools

Patient Resources

Quick Reference Guides/Physician Guides

Slide Presentation

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

## Institute of Medicine (IOM) National Healthcare Quality Report Categories

### IOM Care Need

Getting Better

Living with Illness

### IOM Domain

Effectiveness

Patient-centeredness

## Identifying Information and Availability

### Bibliographic Source(s)

Wong SL, Faries MB, Kennedy EB, Agarwala SS, Akhurst TJ, Ariyan C, Balch CM, Berman BS, Cochran A, Delman KA, Gorman M, Kirkwood JM, Moncrieff MD, Zager JS, Lyman GH. Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update. *J Clin Oncol*. 2018 Feb;36(4):399-413. [44 references] [PubMed](#)

## Adaptation

Not applicable: The guideline was not adapted from another source.

## Date Released

2018 Feb 1

## Guideline Developer(s)

American Society of Clinical Oncology - Medical Specialty Society

Society of Surgical Oncology - Medical Specialty Society

## Source(s) of Funding

All funding for the administration of the project was provided by the American Society of Clinical Oncology (ASCO).

## Guideline Committee

Sentinel Lymph Node Biopsy and Management of Regional Lymph Nodes in Melanoma Guideline Expert Panel

## Composition of Group That Authored the Guideline

*Panel Members:* Gary H. Lyman, MD (*Co-Chair*), Fred Hutchinson Cancer Research Center, Seattle, WA; Sandra L. Wong, MD (*Co-Chair*), Dartmouth-Hitchcock Medical Center, Lebanon, NH; Sanjiv S. Agarwala, MD, St Luke's Cancer Center, Easton, PA; Timothy J. Akhurst, MD, Peter MacCallum Cancer Centre, Victoria, Australia; Charlotte Ariyan, MD, Memorial Sloan Kettering Cancer Center, New York, NY; Charles M. Balch, MD, MD Anderson Cancer Center, Houston, TX; Barry S. Berman, MD, MS, Practice Guidelines Implementation Network (PGIN) Representative, Broward Health Medical Center, Fort Lauderdale, FL; Alistair Cochran, MD, University of California, Los Angeles Center for Health Services, Los Angeles, CA; Keith A. Delman, MD, Emory University, Atlanta, GA; Mark B. Faries, MD, The Angeles Clinic and Research Institute, Santa Monica, CA; Mark Gorman, Patient Representative, Silver Spring, MD; John M. Kirkwood, MD, University of Pittsburgh Cancer Institute, Pittsburgh, PA; Marc D. Moncrieff, MD, PhD, FRCS (Plast.), Norfolk and Norwich University Hospital, Norwich, United Kingdom; Jonathan S. Zager, MD, H Lee Moffitt Cancer Center and Research Institute, Tampa, FL

## Financial Disclosures/Conflicts of Interest

### Guideline and Conflicts of Interest

The Expert Panel was assembled in accordance with the American Society of Clinical Oncology's (ASCO's) Conflict of Interest Policy Implementation for Clinical Practice Guidelines ("Policy," found at [www.asco.org/about-asco/legal/conflict-interest](http://www.asco.org/about-asco/legal/conflict-interest) ). All members of the Expert Panel completed ASCO's disclosure form, which requires disclosure of financial and other interests, including relationships with commercial entities that are reasonably likely to experience direct regulatory or commercial impact as a result of promulgation of the guideline. Categories for disclosure include employment; leadership; stock or other ownership; honoraria, consulting or advisory role; speaker's bureau; research funding; patents, royalties, other intellectual property; expert testimony; travel, accommodations, expenses; and other relationships. In accordance with the Policy, the majority of the members of the Expert Panel did not disclose any relationships constituting a conflict under the Policy.

### Authors' Disclosures and Potential Conflicts of Interest

The following represents disclosure information provided by authors of this manuscript. All relationships

are considered compensated. Relationships are self-held unless noted. I = Immediate Family Member, Inst = My Institution. Relationships may not relate to the subject matter of this manuscript. For more information about ASCO's conflict of interest policy, please refer to [www.asco.org/about-asco/legal/conflict-interest](http://www.asco.org/about-asco/legal/conflict-interest)  or [ascopubs.org/jco/site/afc](http://ascopubs.org/jco/site/afc) .

Sandra L. Wong: No relationship to disclose

Mark B. Faries: Consulting or Advisory Role: Immune Design, Delcath Systems, Novartis, Castle Biosciences

Erin B. Kennedy: No relationship to disclose

Sanjiv S. Agarwala: Travel, Accommodations, Expenses: MSD, Bristol-Myers Squibb

Timothy J. Akhurst: Employment: Intellerad (I); Stock or Other Ownership: Perkin Elmer (I)

Charlotte Ariyan: Employment: Pfizer (I); Stock or Other Ownership: Pfizer (I)

Charles M. Balch: Honoraria: Merck, Merck Sharp & Dohme; Consulting or Advisory Role: Merck; Travel, Accommodations, Expenses: Merck, Merck Sharp & Dohme

Barry S. Berman: Consulting or Advisory Role: Bristol-Myers Squibb, Bayer, Genentech, Alexion Pharmaceuticals, Axess Oncology

Alistair Cochran: No relationship to disclose

Keith A. Delman: No relationship to disclose

Mark Gorman: No relationship to disclose

John M. Kirkwood: Consulting or Advisory Role: Bristol-Myers Squibb, Novartis, Genentech/Roche, EMD Serono, Array BioPharma, Merck; Research Funding: Prometheus (Inst), Merck (Inst)

Marc D. Moncrieff: No relationship to disclose

Jonathan S. Zager: Honoraria: Amgen; Consulting or Advisory Role: Amgen, Castle Biosciences, Delcath Systems; Speakers' Bureau: Amgen; Research Funding: Amgen (Inst), Castle Biosciences (Inst), Delcath Systems (Inst), Provectus (Inst); Travel, Accommodations, Expenses: Amgen

Gary H. Lyman: Consulting or Advisory Role: Halozyme, G1 Therapeutics, Coherus Biosciences; Research Funding: Amgen (Inst)

## Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Wong SL, Balch CM, Hurley P, Agarwala SS, Akhurst TJ, Cochran A, Cormier JN, Gorman M, Kim TY, McMasters KM, Noyes RD, Schuchter LM, Valsecchi ME, Weaver DL, Lyman GH. Sentinel lymph node biopsy for melanoma: American Society of Clinical Oncology and Society of Surgical Oncology joint clinical practice guideline. J Clin Oncol. 2012 Aug 10;30(23):2912-8. [98 references]

This guideline meets NGC's 2013 (revised) inclusion criteria.

## Guideline Availability

Available from the [Journal of Clinical Oncology Web site](#) .

## Availability of Companion Documents

The following are available:

Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update. Data supplement. Alexandria (VA): American Society of Clinical Oncology (ASCO); 2018. 6 p. Available from the [Journal of Clinical Oncology Web site](#) .

Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update. Methodology supplement. Alexandria (VA): American Society of Clinical Oncology (ASCO); 2018. 19 p. Available from the [Journal of Clinical Oncology Web site](#) .

Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update. Slide set. Alexandria (VA): American Society of Clinical Oncology (ASCO); 2018. 11 p. Available in [PDF](#)  and [PowerPoint](#)  from the ASCO Web site.

Sentinel lymph node biopsy and management of regional lymph nodes in melanoma: American Society of Clinical Oncology and Society of Surgical Oncology clinical practice guideline update. Summary of recommendations. Alexandria (VA): American Society of Clinical Oncology (ASCO); 2018. 1 p. Available from the [ASCO Web site](#) .

## Patient Resources

The following is available:

Melanoma. Patient information. [internet]. Alexandria (VA): American Society of Clinical Oncology (ASCO). Available from the [Cancer.Net Web site](#) .

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## NGC Status

This NGC summary was completed by ECRI Institute on August 1, 2012. This summary was updated by ECRI Institute on February 15, 2017 following the U.S. Food and Drug Administration advisory on general anesthetic and sedation drugs. This summary was updated by ECRI Institute on April 16, 2018. The guideline developer agreed to not review the content.

This NEATS assessment was completed by ECRI Institute on April 19, 2018. The guideline developer agreed to not review the content.

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## Disclaimer

### NGC Disclaimer

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